

What is claimed is:

1. A temperature sensor comprising:
a temperature sensing element having electrodes thereon;
elongated electrically conductive lead lines each attached to a
corresponding one of said electrodes, said lead lines being elastic.
2. The temperature sensor of claim 1 wherein said lead lines each
have one end attached to the corresponding one electrode and a non-straight part
proximal to the other end thereof.
3. The temperature sensor of claim 2 wherein said lead lines are each
bent approximately in a semi-circular form in a same direction at said non-straight
part.
4. The temperature sensor of claim 2 wherein said lead lines are each
bent in a same direction at said non-straight part.
5. The temperature sensor of claim 4 wherein said lead lines are each
bent also approximately in a semi-circular form in a same direction at said non-
straight part.
6. The temperature sensor of claim 1 wherein said conductive lead
lines comprise a material selected from the group consisting of phosphor bronze,
german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze,
plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys and plated
brass.

7. The temperature sensor of claim 1 further comprising an electrically insulating cover which covers said temperature sensing element and said lead lines.

8. The temperature sensor of claim 1 wherein said temperature sensing element is an NTC thermistor element.

9. A temperature sensor comprising:
a temperature sensing element having electrodes on mutually oppositely facing main surfaces thereof; and
a pair of elongated electrically conductive planar lead terminals each
5 having a top end part and being twisted, the top end parts of said pair facing each other with a gap therebetween, said temperature sensing element being sandwiched between said top end parts in said gap, each of said top end parts being electrically connected to a corresponding one of said electrodes.

10. The temperature sensor of claim 9 wherein said planar lead terminals are elastic.

11. The temperature sensor of claim 9 wherein said planar lead terminals are twisted at positions proximal to said top end parts.

12. The temperature sensor of claim 9 wherein said planar lead terminals comprise a material selected from the group consisting of phosphor bronze, german silver, beryllium, SUS, Cu-Ti alloys, brass, plated phosphor bronze, plated german silver, plated beryllium, plated SUS, plated Cu-Ti alloys
5 and plated brass.

13. The temperature sensor of claim 9 further comprising an electrically insulating cover which covers said temperature sensing element and said lead terminals.

14 The temperature sensor of claim 9 wherein said temperature sensing element is an NTC thermistor element.

15 A method of producing temperature sensors, said method comprising the steps of:

producing temperature sensing elements each having electrodes on mutually oppositely facing main surfaces thereof;

5 forming a lead frame comprising a linearly elongated base part and a plurality of pairs of planar lead parts extending perpendicularly from said base part;

twisting each of said planar lead parts such that each of said pairs has top end parts which face each other with a gap therebetween;

10 inserting one of said temperature sensing elements between the mutually facing top end parts of each one of said pairs of planar lead parts in the corresponding gap and electrically connecting the electrodes on said inserted one temperature sensing element individually to the top end parts of said corresponding one pair of planar lead parts; and

15 cutting each of said planar lead parts from said base part to form lead terminals of specified lengths for said temperature sensors.

16 The method of claim 15 further comprising the step of covering said temperature sensing elements and said planar lead parts with an electrically insulating material after said temperature sensing elements are attached to said lead frame.

17. A method of mounting a temperature sensor to a base board having throughholes therethrough, said method comprising the steps of:

- 5 preparing a temperature sensor comprising a temperature sensing element having electrodes thereon and elongated electrically conductive lead lines each attached to a corresponding one of said electrodes, said lead lines being elastic and each having one end attached to the corresponding electrode and a non-straight part proximal to the other end thereof;
- 10 inserting said lead lines into corresponding ones of said throughholes; causing said lead lines to stand up obliquely to said base board by hooking the non-straight parts at said throughholes.

18. The method of claim 17 wherein said lead lines are each bent approximately in a semi-circular form in a same direction at said non-straight part.

19. The method of claim 17 wherein said lead lines are each bent in a same direction at said non-straight part.

20. The method of claim 19 wherein said lead lines are each bent also approximately in a semi-circular form in a same direction at said non-straight part.